

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Timothy E. Ostromek et al.  
Appellant

Application No.: 10/699,985

Confirmation No.: 5305

Filed: November 3, 2003

Art Unit: 2624

For: IMAGE PROCESSING USING OPTICALLY  
TRANSFORMED LIGHT

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Examiner: B. Krasnic

**REPLY BRIEF**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.41(a)(1), this Reply Brief is filed within two (2) months of the Examiner's Answer dated February 6, 2009, and is in furtherance of the Appeal Brief, filed on December 9, 2008.

No fee is required for this REPLY BRIEF.

This brief contains items under the following headings pursuant to M.P.E.P. § 1208:

- I. Status of Claims
- II. Grounds of Rejection to be Reviewed on Appeal
- III. Argument
- IV. Conclusion

I. STATUS OF CLAIMS

The status of claims remains as identified in the Appeal Brief submitted December 9, 2008 which is as follows:

A. Total Number of Claims in Application

There are 16 claims pending in application.

B. Current Status of Claims

1. Claims canceled: 7 and 14
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-6, 8-13, and 15-18
4. Claims allowed: None
5. Claims rejected: 1-6, 8-13, and 15-18

C. Claims On Appeal

The claims on appeal are claims 1-6, 8-13, and 15-18.

## II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed remain as identified in the Appeal Brief submitted December 9, 2008, which are as follows:

- A. First Ground—Claims 1-2, 4-6, 8-9, 11-13, and 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,462,046 to Spight et al. (hereinafter *Spight*) in view of U.S. Patent No. 7,187,810 to Clune et al. (hereinafter *Clune*).
- B. Second Ground—Claims 3 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Spight*, as modified by *Clune*, as applied to claims 1 and 8 above, and further in view of U.S. Patent No. 5,537,669 to Evans et al. (hereinafter *Evans*).

### III. ARGUMENT

For the sake of brevity, the arguments in this Reply Brief do not repeat the arguments presented in the Appeal Brief. Instead, this Reply Brief addresses specific assertions and issues raised by the Examiner's Answer and reiterates that the Examiner has not established a *prima facie* case of obviousness of the rejected claims.

#### Claim 1

The Examiner asserts that *Clune*'s initial display means, 262 and 276, be placed between *Spight*'s Fourier transform lens and yield processor. Examiner's Answer at 12. In doing so, the Examiner asserts that metrics from initial display means 262 and 276 would be used in *Spight*'s yield processor. See Examiner's Answer at 13. However, the Examiner's argument has logical flaws showing that the rejection, in its latest incarnation, makes an improper combination.

To the best of Appellant's knowledge, the rejection proposes adding "display means" 262 and 276 of *Clune* into the system of *Spight* after Fourier transform lens 30 and 32. Examiner's Answer at 12. That the "display means" (presumably computer monitors) of *Clune* receive electrical inputs is no hindrance, according to the Examiner, because "it is well known in the art at the time of the invention to go from the light path domain to the digital domain and vice versa by using sensors and processors." Id. at 12. Accordingly, to the best of Appellant's understanding, the modified system now places computer monitors (and accompanying optical-to-electrical conversion equipment at the inputs to the monitors) in *Spight*'s system after Fourier transform lenses 30 and 32. The light output from the monitors is used in the light path of *Spight* just so the optical Fourier information would be used in the original *Spight* system. The reason for modifying *Spight* in such a way is to "improve the validation for the correction of a misalignment between at least two images/signals." Examiner's Answer at 13. The proposed combination is improper because it would render the resultant device unworkable. Furthermore, the recited reasoning for the combination is incorrect and noticeably contrived.

The additions of the pre-display means or initial displays of *Clune* are illogical in the manner presented by the Examiner.<sup>1</sup> The Examiner's combination proposes to display the image on a display means, and for a user to validate a correction. See Examiner's Answer at 13. However, since the image displayed by the monitor is to be used in the system of *Spight*, this means that a user would have to obstruct the light path in order to perform the verification. That is to say, if the user is looking at the image, the user is between the image and beam splitter 34 of *Spight*. Thus, not only is the modified system unworkable, but the proffered motivation is just an illusion and does not hold up to scrutiny.

There is no sense in putting an initial display or pre-display into a light path. The optical information would first have to be converted to digital information, and then fed to a display. As mentioned above, the Examiner proposes to use sensors and processors to adapt the "display means" of *Clune* to the light path of *Spight*. See Examiner's reply at 12. However, *Clune*'s technology would be merely superfluous in the system of *Spight*. The Examiner is essentially stating that the optical signal be converted into digital metrics used by the display means, and then converted back into an optical signal. This is done without any other processing being performed to justify the optical-to-electrical-and-back-to-optical conversion. In this scenario, arguendo, the beam splitter would receive the same input it would have received had *Clune*'s technology not been introduced. In other words, the proposed modification would be pointless, merely adding an optical to electrical conversion and an electrical to optical conversion for the sake of adding hardware. No person skilled in the art would modify *Spight* to include the feature from *Clune* in the absence of an identifiable benefit. Therefore, Appellant respectfully argues that a person of ordinary skill in the art would not have made the proposed combination. Accordingly, claim 1 is not obvious over the supplied art.

On the other hand, if the Examiner proposes merely using display means 262 and 276 of *Clune* to display Fourier transformed light of *Spight* to a user, without utilizing the displayed image as a light source for beam splitter 34 of *Spight*, then the combination does

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<sup>1</sup> As an initial matter, Appellant notes that *Clune* does not refer to pre-displays or initial displays. Rather, the referenced portions of *Clune* are block representations of Fourier transforms of two images of the same object taken at different times. See *Clune*, col. 11, lines 40-55, Figure 2A. Nevertheless, the Examiner has proposed a combination having "display means" 262 and 276, and Appellant addresses the rejection as such. Appellant does not admit that items 262 and 276 of *Clune* are display means.

not meet the features of the claim, specifically that the metrics are processed to yield a processed metric, and that an inverse optical transform is performed on the processed metrics. See Appellants Brief at 9. In other words, if the light from display means 262 and 276 is merely shown to a user, then no further processing is performed thereon. Accordingly, the present rejection is fundamentally flawed, fails to show obviousness of the claims, and should be reversed.

Claims 2, and 4-6.

Appellant respectfully traverses the rejection for the same reasons as set forth above.

Claims 8, 9, and 11-13.

Appellant respectfully traverses the rejection for the same reasons as set forth above.

Claims 15, 16, 17, and 18.

Appellant respectfully traverses the rejection for the same reasons as set forth above.

Claims 3 and 10.

Appellant respectfully traverses the rejection for the same reasons as set forth above.

## IV. CONCLUSION

Further to the discussion above and Appellant's discussion in its Appeal Brief, Appellant submits that claims 1-6, 8-13, and 15-18 are patentable over the applied references. Therefore, Appellant respectfully requests that the Board overturn the rejections of pending claims 1-6, 8-13, and 15-18.

Appellant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 46030/P044US/10407181 from which the undersigned is authorized to draw. Please charge any additional fees required or credit any overpayment to Deposit Account 06-2380 during the pendency of this Application pursuant to 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Dated: April 2, 2009

Respectfully submitted,

By 

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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the U. S. Patent and Trademark Office electronic filing system in accordance with § 1.6(a)(4).

By: 

Linda L. Gibson

Date of Transmission: April 2, 2009